

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Ramanathan Srinivasan, et al

SLURRY FOR CHEMICAL
MECHANICAL POLISHING
SILICON DIOXIDE

Serial No. *Divisional Application of*
US 10/192,471

Filed *Herewith*

Group Art Unit: *To Be Assigned*

Examiner: *To Be Assigned*

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Date: *July 11, 2003*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INFORMATION DISCLOSURE STATEMENT FOR CONSIDERATION
BY THE OFFICE UNDER 37 C.F.R. 1.97-1.99

Enclosed herewith are patents and/or publications for consideration by the Patent and Trademark Office in regard to the invention claimed in the above-described application. In compliance with §1.56, such documents are listed in the enclosed Form PTO-1449.

Applicants request that the Patent and Trademark Office make of record the above-identified documents. Unless otherwise indicated, a full text copy of each document is attached. For documents not in English, an English translation or an equivalent English language patent or publication may be attached. Where a translation is not available, a concise explanation of the relevance of each document not in English is included either here or in the specification.

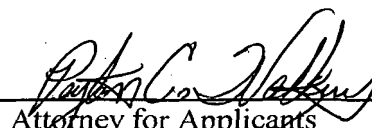
This Information Disclosure Statement (hereinafter "Statement") is submitted according to the following selected paragraph:

- I. ☒ This Statement is being filed under §1.97(b) within three months of the filing date of the application (other than a CPA), or before the mailing of a first Office action on the merits or before the mailing of a first Office action after the filing of a request for continued examination.

Also, please note: *Copies of the cited references were submitted to or cited by the U.S. Patent and Trademark Office under the parent application Serial No. 10/192,471, filed July 10, 2002. Therefore, additional copies of these references are unnecessary, as provided in the Patent and Trademark Office Notice dated April 12, 1977, 957 OG 12.*

- II. ☐ This Statement is being filed under §1.97(c), with fee, **prior** to the mailing date of any of a final action, a notice of allowance or an action that otherwise closes prosecution in the application. Please charge the fee required by §1.17(p) to Eastman Kodak Company Deposit Order Account Number 05-0225. A duplicate copy of this Certification is enclosed.
- III. ☐ This Statement is being filed under §1.97(c), with a certification under, §1.97(e) **prior** to the mailing date of any of a final action, a notice of allowance or an action that otherwise closes prosecution in the application. The undersigned hereby states that (check one):
- ☐ each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
- ☐ no item of information in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this certification under §1.97(e) after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Statement.
- IV. ☐ This Statement is being filed under §1.97(d), with fee and certification under §1.97(e), on or after the mailing date of either a final action, a notice of allowance (but prior to payment of the issue fee) or an action that otherwise closes prosecution in the application. Please charge the fee required by §1.17(p) to Eastman Kodak Company Deposit Order Account No. 05-0225. A duplicate copy of this Certification is enclosed. The undersigned hereby states that (check one):
- ☐ each item of information in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
- ☐ no item of information in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this certification under §1.97(e) after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Statement.

Respectfully submitted,



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Enclosures

FORM PTO-1449

US DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

Atty. Docket No.

80236DPCW

Customer No. 01333

Serial No.

To Be Assigned

If AFTER the later date of the first Office Action or 3 months from filing, use only with Rule 97(E) Certificate or Fee

Applicant:

Ramanathan Srinivasan, et al

LIST OF ART CITED BY APPLICANT

(Use several sheets if necessary)

Filing Date

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To Be Assigned

U.S. PATENT DOCUMENTS

Examiner Initial*	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,738,800	14Apr1998	Hosali et al.	216	99	
	5,759,917	02Jun1998	Grover et al.	438	690	
	6,299,659 B1	09Oct2001	Kido et al.	51	309	
	6,042,741	28Mar2000	Hosali et al.	252	79.1	
	6,132,637	17Oct2000	Hosali et al.	252	79.1	
	6,218,305 B1	17Apr2001	Hosali et al.	438	691	
	6,027,554	22Feb2000	Kodama et al.	106	3	
	5,876,490	02Mar1999	Ronay	106	3	
	5,575,885	19Nov1996	Hirabayashi et al.	156	626.1	
	5,733,819	31Mar1998	Kodama et al.	438	692	
	6,410,444	25Jun2002	Kido et al.	438	693	
	6,436,835	20Aug2002	Kido et al.	438	693	

FOREIGN PATENT DOCUMENTS

Examiner Initial*	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	WO99/43761	01Sep1999	PCT (See EP1061111A1 for english equivalent)			X	
	EP 1 061 111 A1	20Dec2000	EPO (Eng. Eqv. WO99/43761)			X	
	0 786 504 A2	30Jul1997	EP	C09G	1/02	X	
	0 846 740 A1	10Jun1998	EP	C09G	1/02	X	
	0 853 335 A2	15Jul1998	EP	H01L	21/3105	X	
	WO 99/53532	21Oct1999	PCT	H01L	21/00	X	
	0 659 858 A2	28Jun1995	EP	C09G	1/02	X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	Chemical Mechanical Planarization of Microelectronic Materials, "8.1.2 Shallow Trench Isolation"; by J. M. Steigerwald, S. P. Muraka, and R. J. Gutman; ISBN 0-471-13827-4 (Jon Wiley & Son, Inc. 1997), pages 273-274.
	A High Oxide:Nitride Selectivity CMP Slurry For Shallow Trench Isolation; by Sharath Hosali and Ray Lavoie; Electrochemical Society Proceedings, Volume 98-7, pages 218-234.
	Application of Ceria-Based High Selectivity Slurry to STI CMP for Sub 0.18 μ m CMOS Technologies; by Ki-Sik Choi, Sang-Ick Lee, Chang-II Kim, Chul-Woo Nam, Sam-Dong Kim, and Chung-Tae Kim; CMP-MIC Conference, February 11-12, 1999, pages 307-313.
	A Production-Proven Shallow Trench Isolation (STI) Solution Using Novel CMP Concepts; by Raymond R. Jin, Jeffery David, Bob Abbassi, Tom Osterheld, and Fritz Redeker; CMP-MIC Conference, February 11-12, 1999, pages 314-321.
	A Wide Margin CMP and Clean Process For Shallow Trench Isolation Applications; by Brad Withers, Eugene Zhao, Rahul Jairath; CMP-MIC Conference, February 19-20, 1998, pages 319-327.
	Planarization Process and Consumable Development For Shallow Trench Isolation; by Sharath D. Hosali, et al.; CMP-MIC Conference, February 13-14, 1997, pages 52-57.
	Pattern Dependence And Planarization Using Silica Or Ceria Slurries For Shallow Trench Isolation; by D. R. Evans, et al.; CMP-MIC Conference, February 19-20, 1998, pages 347-350.
	A Two-Step CMP-RIE Planarization Sequence For Advanced Trench Isolation Process; by Konstantin Smekalin; CMP-MIC Conference, February 13-14, 1997, pages 21-28.
	Raising Oxide:Nitride Selectivity To Aid In The CMP Of Shallow Trench Isolation Type Applications; by C.R. Mills, et al.; CMP-MIC Conference, February 13-14, 1997, pages 179-185.

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.